

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the above amendments to the claims and following remarks.

Summary of Office Action

In the December 16, 2005 Office Action, claims 1-3, 6, 11, 12, 18, and 19 were objected to for informalities.

Claims 1-3, 6, 11, 12, 18, and 19 were rejected under 35 U.S.C. §112, 1st paragraph as allegedly failing to comply with the written description requirement.

Claims 1-3, 6, 12, 18, and 19 were rejected under 35 U.S.C. §102(e) over U.S. Patent No. 6,583,444 to Fjelstad (Fjelstad'444).

Claim 11 was rejected under 35 U.S.C. §103(a) over Fjelstad'444 in view of U.S. Patent No. 5,739,552 to Kimura (Kimura'552).

Claim 4, 5, 7-10, 13-17 and 20 were withdrawn from consideration as being non-elected.

Summary of Response to Office Action

By this Amendment, Claims 1, 2, 18, and 19 are amended, and claims 21 and 22 are added. The claims currently pending in this application are Claims 1-22. Claims 1, 18, and 20 are the only independent claims.

Response To Objection

Claims 1-3, 6, 11, 12, 18 and 19 were objected to in the December 16, 2005 Office Action for various formalities. By this Amendment, independent claims 1 and 18 are amended to remove the objected-to phrase, "substantially single material," so as to moot the objection of these independent claims.

With regard to the objection of claims 2, 18, and 19, it is respectfully submitted that these claims have been amended in compliance with the Examiner's suggestions such that they provide even clearer antecedent basis for the objected to terms.

The amendments to the claims should not be construed to limit the scope of the claims in any way, and are only made to comply with the Examiner's technical requirements and to correct minor informalities.

In view of the above amendments and arguments, it is respectfully submitted that all claims are free of minor informalities. Withdrawal of the objections is respectfully requested.

Pending Claims Define Allowable Subject Matter

In the December 16, 2005 Office Action, claims 1-3, 6, 11, 12, 18 and 19 were rejected under 35 U.S.C. §112, 1st Paragraph as failing to comply with the written description requirement. This rejection is respectfully traversed for the following reasons.

Applicant respectfully submits that one skilled in the art would have understood the disclosure in the specification as-filed with the present application to disclose a film that is directly connected to the LED chip, albeit via a conductive adhesive. The various conductive adhesives by which the film and LED chip can be directly connected are known in the art, and include welds, bonds, solder joints, glues, etc.

In the interest of expediting prosecution, Applicant hereby amends claim 1 to recite "one of said respective metallic films is composed of a material that is directly connected to one of said electrodes of the light emitting diode chip via a conductive adhesive..." and amends claim 18 to recite that the "electrode is directly connected via a conductive adhesive to...said metallic film."

It is respectfully submitted that these changes to claims 1 and 18 are in compliance with the Examiner's suggestions in the Office Action to overcome the rejection, and that

the claims remain in full compliance with 35 U.S.C. §112, 1st Paragraph. Withdrawal of the rejection is respectfully requested.

In the December 16, 2005 Office Action, claims 1-3, 6, 12, 18 and 19 were rejected under 35 U.S.C. §102(e) over U.S. Patent No. 6,583,444 to Fjelstad (Fjelstad'444). This rejection is respectfully traversed for the following reasons.

Fjelstad'444 discloses a semiconductor package that has a light-sensitive chip. As shown in Fig. 8B of Fjelstad'444 (reproduced at right), the semiconductor package 310 can include a light emitting chip 332 that is attached to a metallic conductive layer 374. The metallic conductive layer 374 is attached at its lower surface to a conductive base 326, which serves as an electrical connection for the package 310.

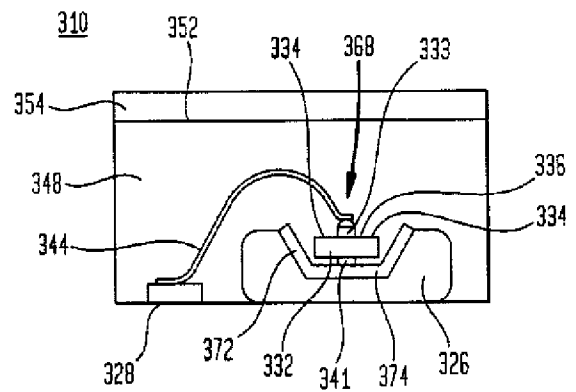


Fig. 8B of Fjelstad'444

In the December 16, 2005 Office Action the Examiner alleges that the metallic conductive layer 374 and conductive base 326 can be considered a film that is “composed of a substantially single material” because the term “substantially” does not necessarily exclude any other materials. Applicant disagrees with the Examiner’s overly broad interpretation of this reference. However, in view of the amendment to claims 1 and 18 in which the term “substantially” is deleted, this portion of the rejection should be considered moot.

Independent claims 1 and 18 now include the feature describing the metal film(s) as “composed of a material that is directly connected to one of said electrodes of the light emitting diode chip...said same material is exposed at the bottom mount surface of the light-emitting diode” and as “of a material that is formed directly on and exposed from a surface of said optically transmissive resin...wherein said electrode (of the light emitting

diode) is directly connected...to said same material of said metallic film," respectively. Neither of these features, along with other features, is disclosed in the Fjelstad'444 patent.

Because Fjelstad'444 fails to disclose or teach each and every feature of either of Applicant's pending independent claims 1 or 18, Fjelstad'444 cannot anticipate the claims. Accordingly, it is respectfully submitted that independent claims 1 and 18 and all claims depending therefrom define over the art of record and are in form for allowance. Withdrawal of the rejection under 35 U.S.C. §102(e) is respectfully requested.

In the December 16, 2005 Office Action, claim 11 was rejected under 35 U.S.C. §103(a) over Fjelstad'444 in view of Kimura'552. This rejection is respectfully traversed for the following reasons.

Kimura'552 fails to make up for the above-noted deficiencies in the Fjelstad'444 patent. Specifically, Kimura'552 and/or Fjelstad'444, either alone or in combination, fail to disclose or teach at least the following features of independent claim 1 (from which claim 11 depends): a metallic film "composed of a material that is directly connected to one of said electrodes of the light emitting diode chip...said same material is exposed at the bottom mount surface of the light-emitting diode" as recited in claim 1 of the present application.

In order to establish a *prima facie* case of obviousness, the Office must satisfy three requirements. M.P.E.P. § 2142. First, "the prior art reference, or references when combined, must teach or suggest *all* the claim limitations." *Id.* (emphasis added). Second, the Office must show that there is "some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings." *Id.* Finally, "there must be a reasonable expectation of success." *Id.*

In this case, the outstanding rejection fails to meet the first prong of the prime facie requirements for obviousness type rejections. As shown above, at least one feature of

independent claim 1 is completely absent from Fjelstad'444 and Kimura'552, either alone or in combination.

It is respectfully submitted that there is also no motivation for combining the references as suggested by the Examiner in the December 16, 2005 Office Action. One of skill in the art would not have looked to the Kimura'552 patent to include additional upper electrodes to the Fjelstad'444 device, as alleged in the Office Action. The Kimura'552 semiconductor device is made using a different process than that of the Fjelstad'444 device, and the resultant architecture of the devices is also different. The Fjelstad'444 device is made by etching a conductive substrate, depositing layers thereon and attaching an LED device thereto, while the Kimura'552 device is realized by various annealing processes in which LED layers are grown on top of substrates and each other. There would have been no reason to believe that the combination of such different structures (that themselves are resultant from different processes) would successfully result in a usable product. It is respectfully submitted that the only reason one would attempt the combination is by using Applicant's claims as a roadmap to attempt such a combination – and such is the exact definition of the use of impermissible hindsight.

Fjelstad'444 or Kimura'552 fail to disclose or teach, either alone or in combination, each and every element as set forth in claim 11. Nor would it have been obvious to have combined the references as suggest by the Examiner. Accordingly, it is respectfully submitted that claim 11 is also allowable, and that the rejection cannot be maintained. Withdrawal of the rejection under 35 U.S.C. §103(a) over Fjelstad'444 in view of Kimura'552 is respectfully requested.

Claims 21 and 22 are added to provide an alternate scope of protection for the invention.


Conclusion

Early and favorable action with respect to this application is respectfully requested. Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

If there are any other fees due in connection with the filing of this response, please charge the fees to the Deposit Account referenced in the application transmittal filed with the original application. If a fee is required for an extension of time under 37 C.F.R. § 1.136 is not accounted for above, such an extension is requested and the fee should also be charged to this Deposit Account.

Respectfully submitted,
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